MPA news

International News and Analysis on Marine Protected Areas Vol. 2, No. 4 October 2000

Communications and MPAs: How Practitioners Are Raising Awareness of MPA Issues

The field of MPA planning and management may still be young, but its collective body of knowledge is growing quickly, through academic journals, textbooks, conferences, and workshops. Nonetheless, familiarity with the concept of MPAs among other stakeholders — including policymakers, fishers, and the general public — is relatively low. While practitioners discuss topics such as mooring buoy placement or self-financing schemes, many in the general public remain unaware that "marine protected areas" even exist.

This month, MPA News examines how various practitioners are attempting to raise public awareness of MPAs for an array of purposes.

Lack of public awareness

A 1999 survey of attitudes among US residents toward marine protected areas found that only a third of those surveyed were aware that their federal government had established "marine sanctuaries". This was despite the fact that the US National Marine Sanctuary Program has existed since 1972, and that 13 sanctuaries have been designated. The survey, conducted by The Mellman Group for SeaWeb (a US-based project to raise public awareness of the ocean), additionally found that 43% of US residents believed that the ocean was a homogeneous body of water and that protecting one particular area of it from pollution or overfishing was useless, because anything done to one part would affect every other part.

Although the survey also found that public attitudes generally favored increased protection of ocean places, the lack of knowledge among US residents about existing MPAs or ocean systems was indicative of a relatively low level of attention being given marine resource management in comparison to terrestrial.

In this light, some campaigns in the US to foster the designation of MPAs have not only had to argue the merits of particular plans but also to raise awareness of the science of MPAs among policymakers and private citizens. One high-profile effort to do this was a national campaign by the Sea Turtle Restoration Project (STRP) to create a no-shrimping zone off the coast of the state of Texas. STRP is a member-funded project of the Turtle Island Restoration Network, a US-based NGO.

High-profile campaign

STRP's goal was to protect waters surrounding key nesting beaches for Kemp's Ridley turtles, an endangered species that can get caught in shrimping gear. STRP wanted the state of Texas to designate a year-round shrimp closure area — to be called the Kemp's Ridley Marine Reserve — out to 9 nautical miles from the coast of Padre Island, in South Texas; no other fishing activities in the area would be banned.

To get the state to designate the no-take area, STRP launched a multi-pronged campaign that included more than a dozen targeted media strategies. Among these strategies, STRP took out full-page advertisements in the national edition of the *New York Times* newspaper, and sponsored a resolution in support of the reserve that was signed by more than 500 sea turtle biologists and conservationists. The project collaborated with Texas newspaper editorial boards to co-author editorials favoring the reserve, and sent out direct mail, e-mail alerts, press releases, letters to public officials, and fact sheets. The project even sponsored a sea turtle art contest, from which children's drawings were prominently displayed in the state capital during an important week when the sea turtle issue was before policymakers.

In the end, STRP achieved what it views as an important first step: last month, Texas wildlife officials designated a seasonal closure (1 December - 15 July) for shrimping out to five nautical miles. STRP has indicated it will continue, and expand, its efforts to create a larger, year-round closure.

Each of STRP's methods was designed to target a particular audience, or audiences. The full-page advertisements in the *New York Times*, for example, reached policymakers, the general public, and other news media. From the start, STRP knew it would have to win the campaign on a national basis,

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MPA News

International News and Analysis on Marine Protected Areas

This issue features a new look for MPA News, intended to make our service more visually appealing and easier to use. The redesign comes courtesy of Robyn Ricks, Senior Graphic Designer for the Washington Sea Grant Program. The change in design will not affect the quantity or quality of information in each month's issue. Please let me know what you think.

John Davis
Editor-in-Chief

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Communications

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said Teri Shore, director of the campaign. "If we stayed in Texas, where nothing had been happening for years, we would have gotten nowhere," she said. Incidentally, STRP is based in the state of California and has just five staffers. "In this day and age, you can do a lot of work long-distance by fax and e-mail," said Shore.

Asked why the project adopted such a high-profile campaign, Shore said public opinion could be a strong catalyst for change, and that it was a necessary and complementary component to the development of scientific, management, and regulatory processes. "Our tactics on this campaign weren't new for us, though maybe they're new to the marine reserve issue," said Shore, whose organization has worked on several international sea-turtle welfare issues. "We have raised public awareness of marine reserves nationally and we believe this will help scientists and managers do their work."

Bringing scientists, policymakers together

The latest scientific findings on MPAs, often published in academic journals with limited subscriberships, can sometimes take a while to reach policymakers. The COMPASS project, funded by the Packard Foundation, intends to speed up that information dissemination process in the US, particularly on the Pacific Coast.

COMPASS — standing for Communication Partnership for Science and the Sea — consists of four partners: SeaWeb, Island Press, the Monterey Bay Aquarium, and a board of scientific experts led by Jane Lubchenco of Oregon State University. It is concerned with more than just MPAs; its overarching goal is to address stresses on the world's oceans by advancing marine conservation science and communicating its knowledge to policymakers, the public, and the media. Marine reserves, however, have arisen as one of the first topics for the project to tackle.

George Leonard, marine science coordinator for the COMPASS project, said one of the main goals of the project's MPA-related efforts is to serve as a convener for the discussion of issues and the development of explicit tasks. Along this line, in August, COMPASS convened a workshop of MPA experts from three sectors — academic, NGO, and government. The group shared information on activities ongoing in the three Pacific coast states and heard the latest science on MPA design produced by NCEAS, the National Center for Ecological Assessment and Science, based at the University of California at Santa Barbara.

"The upshot of the meeting was that a rather detailed list of activities was created that could be achieved over a relatively short time frame," said Leonard. COMPASS has now created a committee to prioritize the items on the list, including activities for creating more MPAs and improving the effectiveness of existing ones.

"We wanted to bring the best people together to decide how to get things done, and we were able to do that," said Leonard. He credited several factors with allowing the project to attract the experts it wanted, including significant funding from Packard (which allowed the project to cover participants' airfare and hotel accommodations) and the assistance of dedicated staff to work on the project.

Communications at the local level

To garner local and regional support for MPAs, the phrase "seeing is believing" is the cornerstone of an approach taken by the Toledo Institute for Development and Environment (TIDE), an NGO in Southern Belize. By taking Belizean, Honduran, and Guatemalan fishers to protected areas in Belize such as Hol Chan or Port Honduras, and then to unprotected sites both in Belize and beyond, TIDE has shown artisanal fishers how MPAs can increase fish stocks and protect habitat.

What started as a "show but don't tell" method has turned into a broader program of experiential learning and fisher exchanges, said Rachel Graham of the University of York (UK), who has assisted with the project. To date, TIDE has organized and funded six exchanges among fishers from Belize, Honduras, and Guatemala. For those fishers from Guatemala and Honduras, whose coastal waters are relatively depleted of fishery resources, seeing the abundance of fish and species in marine reserves has been enough to erase skepticism of the benefits of MPAs, said Graham.

"The fishermen often have a lifetime of knowledge of the marine environment and can readily judge for themselves the state of marine resources," said Graham. "The silent messages from such exchanges have a way of replicating themselves as fishermen relay their experiences back to their communities."

Raising community consciousness of marine conservation has also played a role in the work of Roberto Pardo Angel, a marine biologist and environmental educator on Colombia's Pacific Coast. Humpback whales come to Malaga Bay each year to mate, and Angel helps organize workshops and training sessions about whale-watching regulations and whale biology. Two hundred boat owners and community members have received the training since 1994.

The local community has historically consisted of artisanal fishers, but has grown to appreciate the tourism opportunities associated with the whales. "Eight years ago, the community was afraid of the whales because they thought they [posed] competition for food," said Angel. "Now the feeling has changed due to the whale-watching activities. Also, the beaches are cleaner now for the tourists and for the environment." Activities by several NGOs and government agencies are now encouraging the designation of an MPA in the Malaga Bay area.

Fishing organizations

Fishing organizations have done their part to raise their own members' awareness of the MPA issue. The US-based Pacific Coast Federation of Fishermen's Associations (PCFFA) features a page on its website (www.pond.net/~pcffa/MPA.htm) with links to articles for and against MPAs, books on the topic, organizations advocating MPAs, MPA-related listservs, and information on specific MPAs and reserve programs around the world.

Another website, called eAngler.com, has covered the controversy over creating a no-take ecological reserve in the Dry Tortugas region of the Florida Keys National Marine Sanctuary (MPA News 1:1). The eAngler.com site, operated by eAngler, Inc., a US-based corporation whose mission is to create, maintain, and continually improve "the world's ultimate online fishing resource", has featured pages of quotes from experts for and against the reserve plan (www.eangler.com/articles/content/887/887.asp).

Game to educate about MPAs

A unique tool for raising public awareness of MPAs is under development by the International Marine Mammal Association (IMMA), based in Canada. Called the MPA Puzzle, it is a board game that challenges players to simulate the process of designing and evaluating their own MPA within a multistakeholder group. The target audience, according to IMMA Education Coordinator Jan Hannah, includes grade schools, universities, ecotourist operations, field centers, zoos and aquaria, and even fishing cooperatives.

The goal of the MPA Puzzle is to guide players through the design and evaluation process in a relatively simple, non-threatening way, said Hannah. "We felt that a board game could accommodate the different learning styles and learning levels of our broad target audience," she said. "By simulating the process of creating an MPA using a board game, our hope is that the Puzzle will familiarize stakeholders with the process, prompt them to realize the importance of their role in the process, and bring them closer together." Despite the IMMA's focus on marine mammals, the game does not have a marine mammal slant to it.

In the MPA Puzzle, the success or failure of a group's MPA design is based on the group's ability to reach consensus on the overall management plan. To complete the management plan, the group must choose to implement zoning options or alternative conservation measures that it feels will improve the health of the marine area under consideration. The group then draws cards representing future events and situations, and evaluates the effects of these on the ability of their MPA design to protect the ecosystem.

The MPA Puzzle is undergoing testing now. IMMA expects to have the game ready for distribution from its Ontario office by Spring 2001.

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New Edition of IUCN "Orange Book" Reflects Changes, Challenges in MPA Field

In 1984 when Rod Salm and John Clark wrote the first edition of their textbook *Marine and Coastal Protected Areas: A Guide for Planners and Managers*, they didn't expect they might still be working on it 16 years later. Yet that edition sold out, as did a second edition in 1989, and with demand for the book remaining high through the 1990s Salm and Clark agreed last year to undertake a third edition.

That edition — with major revisions to reflect the past decade of developments in MPA practice — is now available. It is worthwhile reading for practitioners looking for a basic handbook or refresher course, particularly in tropical MPAs.

Thanks to the cover of its original 1984 version, the guide has become known as the "Orange Book". The cover of the new edition is now predominantly blue, but the book's target audience has remained the same: people who find themselves with mandates to plan an MPA or system of MPAs, and who need some basic ideas and approaches to guide them.

The book offers such ideas while trying to avoid being prescriptive, said Salm, now the director of the Asia-Pacific Coastal Marine Program for The Nature Conservancy. "We are really reluctant to promote blueprints or design-by-numbers approaches," he said. "Each case is really different, even vastly so." His advice to practitioners is to approach an area knowing only that there are no pre-formed answers, and to realize that in many instances, even the experts don't honestly know all the questions to ask.

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Orange Book

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Changes in the text

The new edition profiles the significant changes observed by Salm and Clark in how practitioners have come to approach the MPA planning process. The biggest change, they say, has come in the increased use and acceptance of community-management methods (i.e., local communities managing resources) and co-management methods (i.e., local communities collaborating with higher government to manage resources).

"What is different is that broad stakeholder participation is now actually being practiced routinely — rather than talked about or dabbled with — and we are learning how to do this better," said Salm. Acknowledging this, the new edition offers a 14-page chapter titled "Community Engagement"; the 1984 edition devoted no section to such engagement, covering the topic only sporadically.

"If we have learned any lessons about co-management," said Salm, "they are that the line between co-management and community management is blurred and that there will always be a role for government in it." He says that the government's role could be as simple as providing recognition and support for the rights and responsibilities of fisher communities, NGOs, or the private sector over areas that these stakeholders manage.

Clark, an adjunct scientist at the Mote Marine Laboratory in Florida (US), points out that part of the basic philosophy of MPA planning and management may have changed in the past two decades as well. "Previous to the 1980s, MPA design was held captive to terrestrial ideas that had a strong no-touch 'preservation' philosophy," he said. "Now there is a wider scope for design of MPAs with a multiple-use 'conservation' approach. In fact, many MPA management programs are now aimed at sustainable use, not no use."

Despite these changes, said the authors, the book's audience still faces many of the same challenges that it faced 20 years ago. "It is surprising how many people in how many countries of the world are still struggling with the same challenge: How do I go about selecting the site and establishing an MPA?" said Salm. "Even when MPAs have been established in name and now require management, the challenge of how to go about determining boundaries and zones is still there for many practitioners."

To order the book

The third edition of *Marine and Coastal Protected Areas: A Guide for Planners and Managers* costs £20.50 (US $30.75). It can be ordered (Order #8563) from the IUCN Publications Services Unit, 219c Huntingdon Road, Cambridge CB3 0DL, UK. E-mail: *info@books.iucn.org*; Website: www.iucn.org/bookstore/index.html.

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Edition focuses on tropical MPAs

The new edition focuses in particular on MPAs in tropical waters, marking the first time the Orange Book has narrowed its focus this way. The first two editions covered tropical, temperate, and polar protected areas. The authors cite several reasons for the change, including that, over the years, most of the feedback and requests for copies of the book have come from practitioners in tropical regions.

"These countries are greatly in need of technical information and advice," said Clark. He points out that tropical countries exhibit a relatively high dependence on coastal resources for food and economic inputs. To serve the tropical audience, the new edition offers 25 case histories of tropical MPAs and provides sections with tailored advice for planning and managing MPAs in various tropical ecosystems, including coral reefs, lagoons, and (primarily sandy) beaches.

IUCN (the World Conservation Union) has published the book since its first edition. John Waugh, director of the IUCN Marine Programme, said that this edition's focus on tropical systems was in part due to the sense that in temperate areas, most managers have access to science advisors and are generally well-trained. Thus, the book would tend to be too general for them, he said. He added, however, that he would be open to considering the need for a companion book to cover temperate MPAs.

Waugh said IUCN is looking into the possibility of translating the new edition into Arabic, Spanish, and Thai this year.

Need for more MPA resources

Salm and Clark cite the need, beyond their book, for more resources to guide MPA planning and management. Clark suggests that readers of the guide would be well-advised to extend their reading into the area of broad coastal management on the one hand and detailed technical instruction on the other.

Salm says that MPA management is more difficult to learn from a basic textbook than MPA planning. "It is in management that the greatest difference in approach lies, and where a compendium of practical texts on different management techniques would be the most useful," he said. He said such techniques could include the installation and maintenance of moorings; conflict management and outreach approaches; surveillance and enforcement techniques; financing mechanisms; and so on.

The authors point out that this edition, like the first two editions, was a voluntary exercise, and will generate no gain for them other than the hope that more MPAs will be established and effectively managed as a result of its publication. The field of MPA planning and management is constantly changing, and so the book represents a snapshot in time. "We would never claim the book to be a state-of-the-art treatise on MPAs," said Salm. "It is simply the good old Orange Book updated as much as is reasonable, and back on the shelves by popular demand."

Reader Feedback on the Re-opening of Closed Areas

The September 2000 issue of MPA News featured an article on the concept of rotating closed areas: that is, alternately closing and re-opening areas to fishing, allowing time for stocks to rebuild after each open season. With managers and researchers around the world beginning to consider the idea, it could represent an emerging trend in fisheries management.

MPA News asked readers to comment on the idea. Below, we've printed three of the letters we received. The first is from Graham Edgar, who was quoted in the September article.

Dear MPA News:

I would like to comment further on the benefits of cyclically re-opening MPAs, as discussed in the last issue of MPA news, particularly your suggestion that declaration of MPAs is primarily to protect (1) fisheries or (2) fish. I also feel strongly that MPAs are and should be declared to protect (3) ecosystems/habitat.

It worries me that your discussion of the benefits of cyclically re-opening habitat for trawling has, for example, ignored the substantive impacts of bottom dredging on sediment geochemistry and benthic habitat structure. In most cases, prohibitions on trawling or dredging are for habitat protection rather than fisheries enhancement, as has occurred off southern Tasmania where a large offshore area with numerous seamounts has been closed to bottom trawling. For this particular region, a CSIRO study[1] found:

(i) seamounts possessed "a diverse fauna characterized by a large proportion of species endemic to local seamounts"

(ii) "all shallow hills were heavily fished"

(iii) "the substrate of all heavily fished seamounts in the area consists predominantly of either bare rock or coral rubble and sand, and this was not seen on any of the (deeper) seamounts that was lightly fished or unfished"

(iv) "trawl operations appear to have significantly impacted the most heavily fished seamounts, where reef aggregate has mostly been removed from the slopes or turned to rubble."

Re-opening such areas may have limited benefits for fishermen but certainly would be detrimental from a biodiversity perspective.

In the particular case of the New England scallop fishery [as discussed in the September article], re-opening closed areas to scallop fishers seems a good idea for the scallop fishers, but is bad for conservation of biodiversity because of detrimental ecosystem effects, generally bad for other fishing sectors (e.g., groundfishers get no benefit and an indeterminate loss), and possibly bad for the scallop fishers themselves if regional recruitment is related to stock density.

I would also like to clarify a point with respect to the Galápagos marine reserve. I would not like to see any re-opening of areas in the Galápagos that are presently closed to fishing. On the other hand, I think that closing areas currently open to fishing and re-opening them on a cyclical basis is a good idea. From my experience of Galápagos, Tasmania and elsewhere, it is quite clear that closing any area from fishing requires a huge struggle, hence any suggestion that such areas can possibly be reopened will normally prove counterproductive (especially in the usual case where closure was originally intended to be permanent).

Graham Edgar
Head of Marine Research and Conservation
Charles Darwin Research Station

[1] Koslow, A.J., Gowlett-Holmes, K., 1998; The seamount fauna off southern Tasmania: benthic communities, their conservation and impacts of trawling. Final Report to Environment Australia and the Fisheries Research Development Corporation, CSIRO, Hobart, Australia.

Dear MPA News:

Having been on the scene for 50+ years, I've heard all the various wake-up calls. It's almost predictable that the trendy stuff rises up and disappears only to be discovered again by the next generation! Maybe they don't read, or think history is stupid or whatever. For examples:

1) The greenhouse effect was reported first by French mathematician Baron Joseph Fourier in 1827. It was given the label "greenhouse" by the great Swedish scientist Svante Arrhenius in the 1890s; at this same time Jules Verne was writing about sea level rise! I was first alerted to the effect in the 1950s by the reports of the famous oceanographer Roger Revelle.

2) Same thing with rotational fishing (*re* MPA News: Re-opening closed areas...). Farmers have been doing this since the creation. *Re* fishing, this was proved conclusively in the early 1940s! When WW II prevented fishing in the North Sea, fish stocks increased exponentially — and there was a short-lived harvest bonanza in 1945-47. So what is this surprising and "astounding success"? Something unexpected?

As T.S. Eliot once said: "We had the experience but missed the meaning."

John Clark
Adjunct Scientist
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Dear MPA News:

If fishers wish to close currently fished (overfished) areas for a year or more and then re-open them, and then flog them, that is up to them. It may provide some protection for those overfished areas.

Currently closed areas, however, must remain closed to protect biodiversity and the gene pool. If currently closed and protected areas were opened, they would be fished out in a month. The whole idea seems like a push by fisheries managers to open up new and formerly protected ground.

Pat O'Brien
President
Wildlife Protection Association of Australia, Inc.

MPA Update: Race Rocks to Become Canada's First Official MPA

On September 14, Canada's minister of fisheries and oceans endorsed a plan that will make the waters surrounding Race Rocks, a small nine-islet archipelago, the first official marine protected area in Canada. Commercial fishing and most sport fishing will be off-limits in the MPA, which will measure a little less than one square mile, or 2.6 sq. km, in area. Race Rocks is located on the southernmost end of the nation's Pacific coast (MPA News 1:8).

Canada's Department of Fisheries and Oceans (DFO) designated Race Rocks in 1998 as one of several "pilot MPAs", part of a strategy to determine whether those areas should be formally designated as MPAs and how they could best be managed (MPA News 1:1).

Now that it has received the minister's endorsement as an MPA, Race Rocks will undergo a regulatory process to formalize the MPA designation; the process is expected to conclude within a few months. Although Race Rocks will be the first Canadian site to receive the title of "marine protected area" under the nation's Oceans Act, there already exist several protected areas in Canadian waters managed by other agencies. These include two "national marine conservation areas" managed by Parks Canada, and several coastal "national wildlife areas" and "marine wildlife areas" managed by Environment Canada. Together, the three agencies play complementary roles in protecting Canada's offshore and coastal systems.

Integrated management

In 1980, the province of British Columbia recognized the biodiversity of the Race Rocks area by designating it as an ecological reserve under provincial management. This authority has provided for the protection of the nine islets and the ocean bottom to a depth of 20 fathoms, but the province has lacked jurisdiction over the water column.

The MPA designation by DFO will allow for integration of federal (water column) and provincial (terrestrial and seabed) initiatives. Canada's Oceans Act, launched in 1997, provides for DFO to develop integrated management plans with other federal agencies, provincial governments, aboriginal organizations, and coastal communities for the conservation and protection of Canada's oceans.

In 1999, officials from DFO and the British Columbia provincial parks agency (BC Parks) established an advisory board to represent stakeholder groups in the pilot MPA process and make consensus-based recommendations to federal and provincial regulators. The board included representatives from federal and provincial agencies, aboriginal groups, the Department of National Defense, the scientific community, the diving and sport fishing communities, NGOs, and others. It was this advisory board that recommended that Race Rocks' status be changed from pilot to full MPA, a plan that the minister endorsed last month.

Overall management of the MPA and ecological reserve will be achieved through a combination of regulatory actions and voluntary compliance guidelines for a number of activities and issues, such as recreational boating, diving practices, whale watching, education, and research. Monitoring and assessment of the guidelines' effectiveness will occur over a two-year period. Depending on the results, activity regulations may then be considered if necessary.

Named for its strong tidal currents and rocky reefs, Race Rocks features a wide array of Pacific marine wildlife, including whales, sea lions, seals, birds, Northern abalone, and kelp forests. Race Rocks is located 17 kilometers southwest of the city of Victoria.

Canada's remaining pilot MPAs on the Pacific coast are Gabriola Passage, Endeavour Hot Vents, and Bowie Seamount. Off the Maritimes on the Atlantic coast, there are two pilot MPAs, at Basin Head and Sable Gully.

The Race Rocks website is at http://www.racerocks.com.

For more information

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